

### **Abstract**

The present invention provides a process and a device for regeneration of a nitrogen oxide storage catalyst in the exhaust system of a diesel engine. The process comprises a first and a second regeneration strategy. The first regeneration strategy is applied when the exhaust gas temperature is above a threshold value and comprises changing the air/fuel-ratio from a lean to a rich value during a first regeneration period. The second regeneration strategy is applied when the exhaust gas temperature is below a threshold value and comprises switching the air/fuel-ratio back and forth between lean and rich air/fuel-ratios, forming a sequence of between 2 and 10 rich pulses and between 2 and 10 lean pulses during a second regeneration period.